



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE/NOAA FISHERIES**

Pacific Islands Fisheries Science Center  
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## **CRUISE REPORT<sup>1</sup>**

**VESSEL:** F/V *Katy Mary*, Cruise NC-06-02

**CRUISE PERIOD:** 18 July 2006 – 16 August 2006

**AREA OF OPERATION:** Laysan Island and Maro Reef, Northwestern Hawaiian Islands (NWHI)

**TYPE OF OPERATION:** Personnel from the Joint Institute for Marine and Atmospheric Research (JIMAR) conducted lobster trapping and tagging in the waters around Laysan Island and Maro Reef, NWHI from 18 July to 16 August 2006 in support of a Pacific Islands Fisheries Science Center (PIFSC) research project to study lobster population dynamics.

### **ITINERARY:**

- 18 July Start of cruise. On board Kahikina Kaawaloa, Joseph O'Malley, Anthony Santos. Departed Pier 35, Honolulu, Oahu at 1000; transited to Laysan Island.
- 22 July Arrived Laysan Island. Commenced lobster trapping and tagging operations.
- 23 July Continued lobster trapping and tagging operations.
- 01 August Hauled lobster traps and departed Laysan Island. Transited to Maro Reef.
- 02 August Arrived Maro Reef. Commenced lobster trapping and tagging operations.
- 03 August Continued lobster trapping and tagging operations.

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<sup>1</sup> PIFSC Cruise Report CR-06-027  
Issued 28 August 2006



11 August Hauled lobster traps and departed Maro Reef; transited to Honolulu, Oahu.

16 August Arrived Pier 35, Honolulu, Oahu at 1300. End of cruise.

## MISSIONS AND RESULTS:

### 2.1 Missions of the cruise are:

- A. Collect, tag, and release live trap-captured Hawaiian spiny lobster (*Panulirus marginatus*) and scaly slipper lobster (*Scyllarides squammosus*) to provide data necessary for reestimation of key biological and population parameters for the Laysan Island and Maro Reef lobster stock.

A total of 300 trapping stations were fished with black plastic lobster traps. Each trapping station consisted of a string of 20 traps. Traps, set between 0930 and 1900 hours, were baited with mackerel and allowed to soak overnight. A total of 300 traps were set each night. In addition to collecting the tag number from previously tagged *P. marginatus* and *S. squammosus*, sex, carapace length, and reproductive information were collected from each lobster caught. All untagged *P. marginatus* and *S. squammosus* were tagged. All tagged lobsters were released.

- B. Collect data on abundance and species composition of trap-captured lobsters at Laysan Island and Maro Reef.

A total of 300 trapping stations were fished with black plastic lobster traps. Each trapping station consisted of a string of 20 traps. Traps, set between 0930 and 1900 hours, were baited with mackerel and allowed to soak overnight. A total of 300 traps were set each night. All lobsters captured were recorded by species.

- C. Obtain lobster length-frequency data to compare with previous research and commercial fishery data.

A total of 300 trapping stations were fished with black plastic lobster traps. Each trapping station consisted of a string of 20 traps. Traps, set between 0930 and 1900 hours, were baited with mackerel and allowed to soak overnight. A total of 300 traps were set each night. All captured lobsters were recorded by species and measured.

- D. Collect 25 spiny and 25 slipper lobster from each bank for nutritional and genetic analysis.

Twenty-five spiny and 25 slipper lobsters were collected from each bank for nutritional and genetic analysis.

**SCIENTIFIC  
PERSONNEL:**

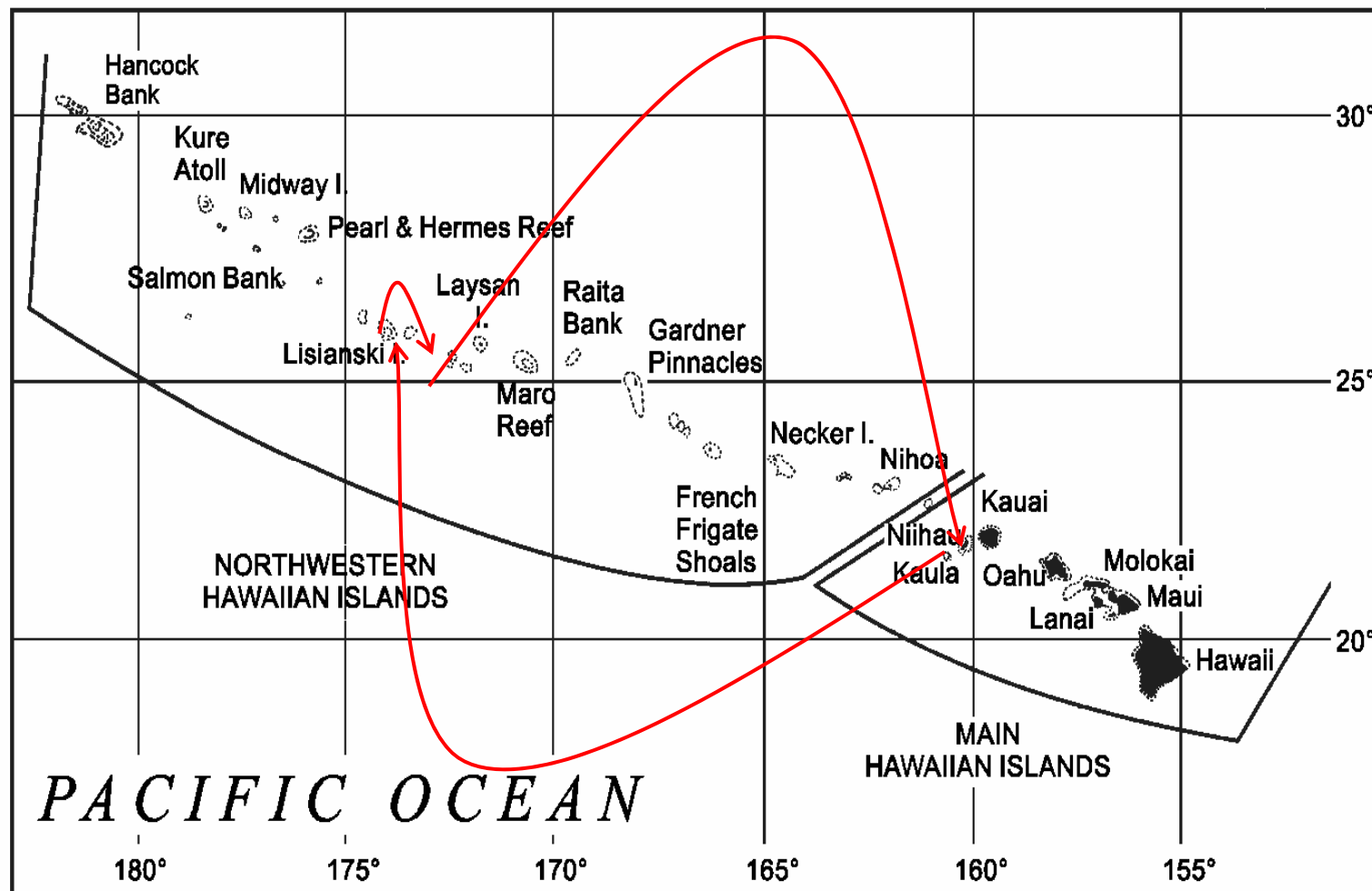
<i>Name</i>	<i>Title</i>	<i>Sex/Nat.</i>	<i>Organization</i>
Kahikina Kaawaloa	Cooperating Scientist	M/USA	MRAG, Inc.
Joseph O'Malley	Chief Scientist	M/USA	JIMAR
Anthony Santos	Cooperating Scientist	M/USA	MRAG, Inc.

Submitted by: (/s/Joseph M. O'Malley)  
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 Joseph M. O'Malley  
 Chief Scientist

Approved by: (/s/Samuel G. Pooley)  
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 Samuel G. Pooley  
 Science Director  
 Pacific Islands Fisheries Science Center

Attachments

## Appendix 1.

Figure 1. Track of the *Katy Mary*, NOAA Charter Cruise NC0602, July 18 to August 16, 2006

**Appendix 2:** NC0602 Summary of Principle Data Collected

At Laysan Island, a total of 150 trapping stations were fished with black plastic lobster traps. Each trapping station consisted of a string of 20 traps. Traps, set between 0930 and 1900 hours, were baited with mackerel and allowed to soak overnight. A total of 300 traps were set each night. Approximately 370 *P. marginatus* and 964 *S. squammosus* were caught and released at Laysan Island. Sex, carapace length, and reproductive information were collected from each lobster caught.

At Maro Reef, a total of 150 trapping stations were fished with black plastic lobster traps. Each trapping station consisted of a string of 20 traps. Traps, set between 0930 and 1900 hours, were baited with mackerel and allowed to soak overnight. A total of 300 traps were set each night. Approximately 2,131 *P. marginatus* and 3,167 *S. squammosus* were caught and released at Maro Reef. Sex, carapace length, and reproductive information were collected from each lobster caught.

Twenty-five *P. marginatus* and 25 *S. squammosus* were collected from each bank for nutritional and genetic analysis. The genetic samples were transported to researchers at Hawaii Institute of Marine Biology.

**Appendix 3:** NC0602 Human waste discharge record.

<b>Date</b>	<b>Location</b>		<b>Depth (fathom)</b>	<b>Time</b>	<b>Vessel Speed</b>
	<b>Latitude</b>	<b>Longitude</b>			
7/22/2006	25 51.000	171 33.242	518	2200	7
7/23/2006	25 55.238	171 42.191	658	1745	8.2
7/24/2006	25 55.783	171 44.587	577	1630	7
7/25/2006	25 56.397	171 47.887	595	1855	7
7/26/2006	25 56.475	171 51.753	539	1910	7
7/27/2006	25 44.548	171 52.361	534	1735	7
7/28/2006	25 41.892	171 42.577	530	1910	7
7/29/2006	25 40.587	171 43.694	575	1930	7
7/30/2006	25 44.463	171 34.631	604	1730	7
7/31/2006	25 44.138	171 35.696	542	1815	7
8/01/2006	25 46.340	171 18.488	1800	1700	7.3
8/02/2006	25 24.740	170 12.091	832	1750	7
8/03/2006	25 33.298	170 25.259	523	1945	7
8/04/2006	25 36.257	170 26.529	525	2325	7
8/05/2006	25 44.859	170 39.971	524	2120	7
8/06/2006	25 20.126	170 53.229	515	2045	7
8/07/2006	25 20.007	170 50.949	553	2030	7
8/08/2006	25 18.557	170 49.672	555	1955	7
8/09/2006	25 15.138	170 37.645	570	2045	7
8/10/2006	25 11.729	170 31.485	515	2005	7
8/11/2006	25 17.290	170 16.823	536	1927	7